

PROPOSED DESIGNS
for
THE CATHEDRAL
of
SAINT JOHN THE DIVINE
NEW YORK

SECOND EDITION



"The hand that rounded Peter's dome
And groined the aisles of Christian Rome
Wrought in a sad sincerity;
Himself from God he could not free;
He builded better than he knew;—
The conscious stone to beauty grew."

* * * *

"Earth proudly wears the Parthenon,
As the best gem upon her zone,
And morning opes with haste her lids
To gaze upon the Pyramids;
O'er England's abbeys bends the sky,
As o'er its friends, with kindred eye;
For out of Thought's interior sphere
These wonders rose to upper air;
And nature gladly gave them place,
Adopted them into her race,
And granted them an equal date
With Andes and with Ararat."

—From "*The Problem*," by R. W. EMERSON

11TH STREET

112TH STREET

FOUNDATION OF NAVE

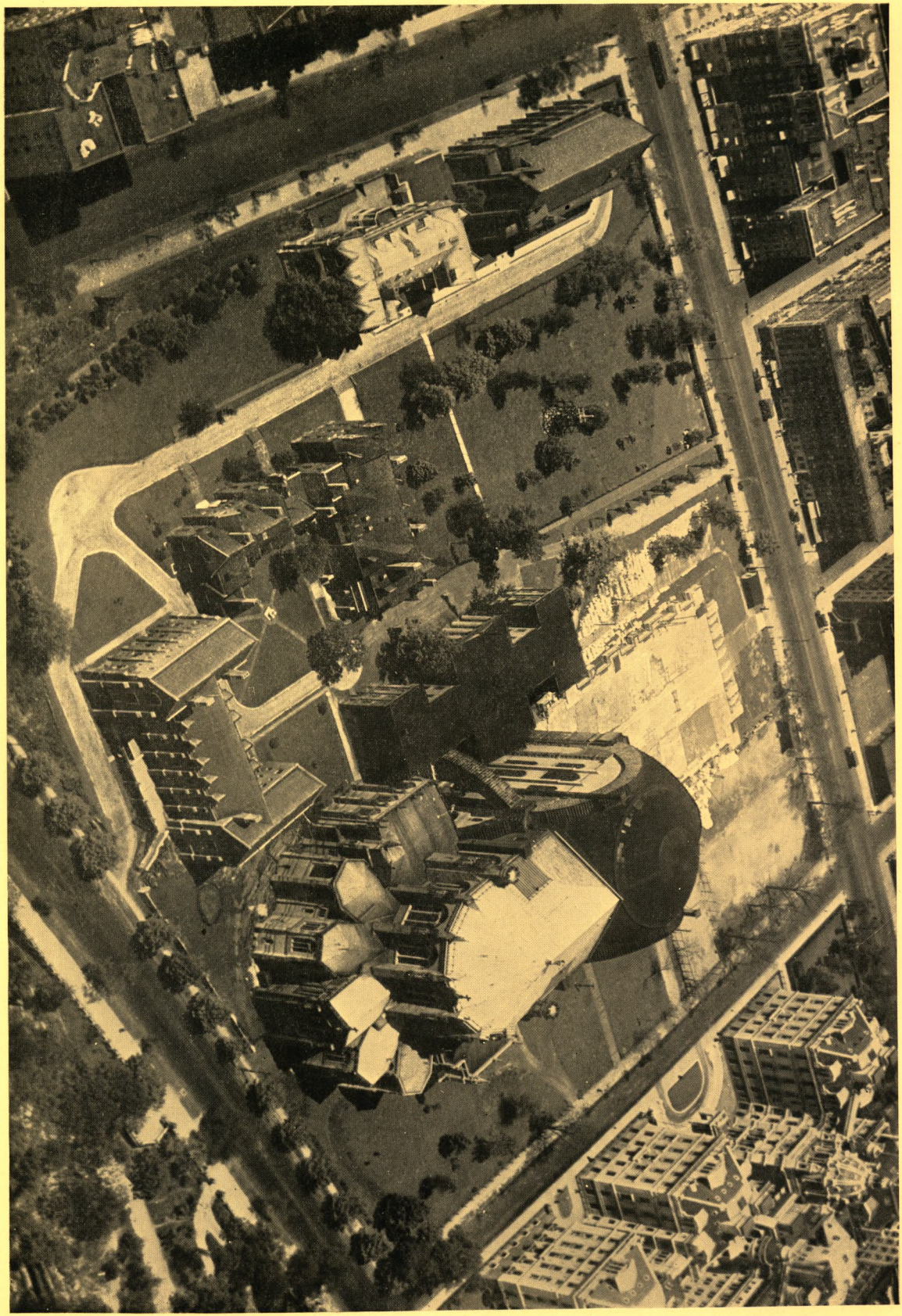
113TH STREET

ST. LUKE'S HOSPITAL

AMSTERDAM AVENUE

SYNOD HOUSE

ST. FAITH'S HOUSE



110TH STREET

BISHOP'S HOUSE

DEANERY

CHOIR SCHOOL

CATHEDRAL

MORNINGSIDE PARK

AIR PLANE VIEW OF CATHEDRAL CLOSE

Foreword

On the occasion of the tenth anniversary of the consecration of the choir and crossing, April 19, 1911, the Trustees of the Cathedral present to those whose generous aid and interest has brought this great project thus far on its way this report on the development of the designs for its completion. While these plans may be modified in detail, it is believed that the types and principles of design here indicated will be faithfully followed. This pamphlet is made up of illustrations and articles which appeared in the Easter issues of *The Churchman* in the years 1919 and 1921.

DIMENSIONS

Of Area 109,082 square feet

Of Length

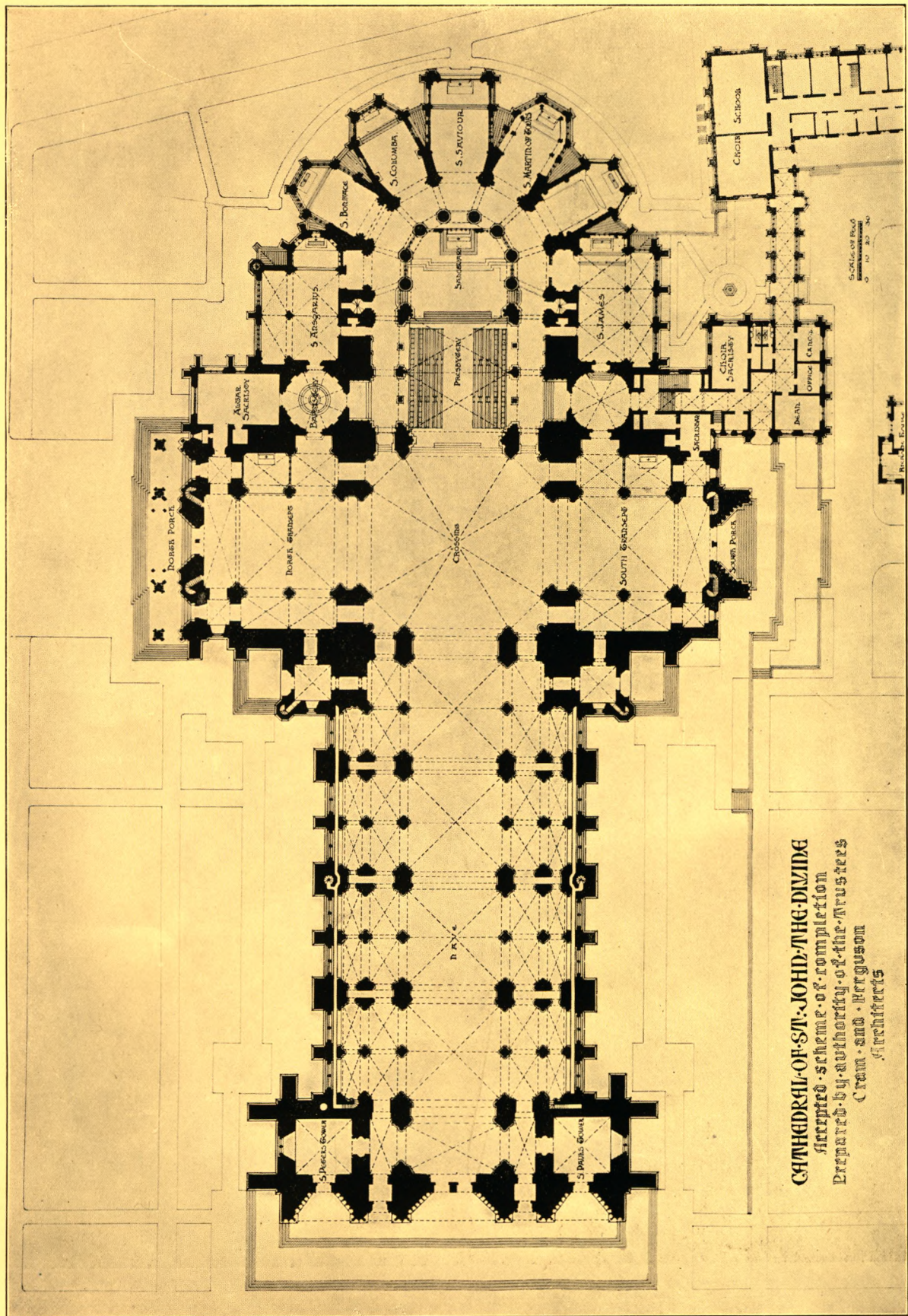
Western Towers (square)	50 feet
Nave	225 "
Crossing	100 "
Choir	170 "
St. Saviour's Chapel	56 "
Total Length	601 "

Of Width

West Front (inc. Buttresses)	220 feet
Nave and Aisles (exterior)	132 "
Transepts	315 "
Nave (interior)	56 "
Aisles (each)	34 "
Crossing	100 "
Choir	56 "
Ambulatory	20 "

Of Height

Western Towers	265 feet
Ridge of Nave Roof	175 "
Nave Vaults (above floor)	130 "
Choir " " "	127 "
Crossing " " "	200 "
Central Fleche " "	470 "
Finial Cross (30 feet) "	500 "
" " above tide water	631 "



CATHEDRAL OF ST. JOHN THE DIVINE
 Accepted scheme of completion
 Prepared by authority of the Trustees
 Crum and Ferguson
 Architects



PROPOSED WEST FRONT

THE CATHEDRAL OF ST. JOHN THE DIVINE

WHEN it was decided to proceed with plans for the nave of the Cathedral of St. John the Divine it became necessary to consider schemes for the various parts of the entire edifice in order that the whole might be in harmony. The consulting architects said that these projects could only be considered as tentative. So vast a problem and one bringing up so many new questions was not lightly to be solved. It is possible that the completion of the building may take place only when all those now living are dead; the final decision may be in other hands. Architecture is more than the expression of the private predilections of individual practitioners, it has in it something that is communal. A project such as this must grow from year to year, earlier ideas being modified or altogether discarded, others taking their place, perhaps in their turn also to be abandoned.

Precisely this has happened. The nave has been designed throughout, complete working plans prepared. The general scheme has been under constant consideration not only by the architects, but by the ecclesiastical authorities, the trustees and the general public. The result of this corporate scrutiny is a unanimous desire to seek motives other than those first suggested. The drawings herewith published are the outcome.

The original tentative designs published in *THE CHURCHMAN*, Easter, 1919, produced under the direction of the consulting architect, offered solutions of two problems. These were, first, the crossing with its tower or towers, second, the west front. Neither of these solutions was considered final. In the case of the west front the design indicated was never held to be anything more than "a" front. Time was then lacking for the minute study necessary. During the war this time has been afforded, and the new west façade represents in a general way what the architects believe to be a final solution of the problem. This does not extend to details, which will have to be studied and re-studied. Particularly is this true of the upper portions of the towers, but the general composition is one which the architects are prepared definitely to recommend.

As will be seen, a façade of five units has been adopted, based rather on the fronts of Bourges and Wells than on the three-unit façades of Notre Dame, Amiens and Rheims. The three-unit façade was the one most popular during the Middle Ages, and was simply an exterior expression of the nave, buttressed by two great towers, which either cover both side aisles as in the five-aisled plan of Notre Dame, or project well beyond the single side aisle, as in numerous three-aisled instances. Bourges and Wells strike a new scheme of great possibilities.

In these cases the nave and both of the double side aisles are expressed by portals in the façade, while the towers are pushed to the north and south, so giving a front of greater width, more perfectly expressing the organism behind.

In the present design an attempt has been made to combine the great verticals of Bourges and Wells with the powerful horizontals of Notre Dame, Amiens and Rheims, the idea being to knit the composition together with a definiteness that was not attained in the above-named five-unit façades. The deep porches of Rheims and Amiens with their immense shadows take the place of the shallow portals of Bourges, while the verticals of the towers are modeled more or less on those of Rheims Cathedral. It seems to the architects that the enormous bulk of the New York cathedral will not only support, but actually demand a façade as wide and spacious as that now shown.

In the case of the crossing and its treatment, the problem was, and still remains, infinitely more difficult. Here is a great central square, four times larger in area than any Gothic crossing. The many studies made some years ago, searching after a scheme for a single central tower that should not (by reason of its abnormal area) dwarf and crush all the rest of the building, were not successful, and the architects were willing for a time to consider the idea of a tower over the crossing which should be merely high enough to include the vaulting of the crossing, with two lofty towers capped with slender spires placed on either side of the nave at the junction of the transepts. This is a primitive motive found chiefly in Lombard and Romanesque work where it is used with great effectiveness. It must be admitted that the necessity of carrying up the great square of the crossing (126 feet by 126 feet) sufficiently above the roof to provide an adequate lantern complicated the question materially and perhaps made the result less satisfactory than would have been the case had the roofs crossed without external expression of the central vault, as happens in many of the thirteenth century French cathedrals.

RALPH ADAMS CRAM.

[As Mr. Cram was out of the country when the plans for the central mass and the completion of the choir were adopted, the further explanation of the plans was carried out by another hand.—EDITOR.]

In finally reconsidering the treatment of the central mass, the architects have been forced back to the original idea of a single central tower in two stages, recalling the lantern of Ely by its polygonal plan. The

lantern is made polygonal to preserve its proportion with the rest of the building from whatever angle seen, which is not possible to a rectangular tower when seen from varying viewpoints. It was the opinion of some of the authorities that the proposed double lantern lacks aspiration, that is, that it seems cut off, too broad and flat at the top and that the eye demands to be led higher, seeking a harmonious finish. The precedent of Ely proved to be misleading; the upper lantern of Ely is built of timber and is only twenty-eight feet in diameter, while the eighty-six feet of the proposed upper lantern obviously demands different treatment. Accordingly, in the last design, standing on the upper lantern there appears a fleche or spirelet of open stonework like that of Bourges, but only one half the width at its base of the diameter of the fully developed spire proposed by the first architects and quite as high. The gradual narrowing of the structure from its base on the great arches of the crossing up to the cross that crowns it at a height of 500 feet, complies with popular taste as well as with one of the most authoritative principles of design. The great verticals, the strongly accented piers that separate the windows and support the whole, re-echo the commanding verticality of the west front. The pierced stonework of the fleche adds high poetic charm. As it ascends the strength of the building blossoms out in enhanced beauty.

The revised scheme for the choir now awaits discussion. The trustees looked far ahead when they asked, "What effect will the proposed nave have on the choir and how can the two be brought into harmony?" Obviously discordant elements of style and proportion had already raised these "obstinate questionings" in the public mind. The choir will serve as it is until the nave is built, but the public must be convinced that all parts of the great structure will *finally* be completely harmonious. The cathedral cannot be built without the enthusiastic public approbation of the whole scheme. The nave, nearly as high and quite as wide as that of Milan, imposes its own scale on the whole structure. The nave of the first design was to be but ninety feet high, in this plan it has a height of 130 feet. The Byzantine semi-dome over the altar much reduces the apparent height of the choir; another thing conspires to the same end. The choir may be called a recess or alcove of the completed structure. Theorists hold that the apparent height of an alcove is determined by the height above the floor of the topmost point of illumination, for instance, by the peak of the highest windows. The present highest point of illumination is 80 feet, inadequate to balance the 110 feet of the rose window in the west end of the nave. The result of these discrepancies of height will be that the nave when built will fatally dwarf the



PROPOSED NORTH ELEVATION

choir. The Byzantine dome will be discordant with the thirteenth century Gothic of the nave. Fortunately the semi-dome is but a thin terra cotta shell, which performs no structural function and is easily removable. If removed there would be disclosed, resting upon the massive, close-set granite columns which surround the apse, a high clear-story wall, supporting the structural roof, pierced by seven clear-story window openings, twenty-two feet high. The semi-dome conceals the existing structural members of a thirteenth century French Gothic apse! There are fifty feet of construction *above* the capitals of the great columns, as much height of wall *above* as there is length of column *below* the capitals, furnishing what is entirely lacking now—an adequate load and a reason for the massiveness of the columns. If the window openings now hid by the semi-dome were glazed and illuminated by the sun, they would lead the eye upward to a point 120 feet above the nave floor, with the effect of raising the apse to a glorious equality with the nave. The whole structure, from one end to another, would thrill with harmonious aspiration. The standard construction of a thirteenth century apse includes close-set massive columns round or nearly so in section, crowned with narrow arches, above which runs a small triforium gallery and higher still a series of stained windows, set in lovely vaulting. This scheme is followed in 17 of the great cathedrals of France. The choir of St. John's is from 15 to 20 feet wider than the French choirs, permitting of much more beautiful groining than is possible in narrower structures.

At present on each side of the choir above the organs, there are seen clear story windows, reaching into the vaults. These windows are lighted by *sky lights* in the lower part of the roofs, a sheer irrationality and anomaly! By the removal of the semi-dome a series of windows would be shown encircling the apse, admitting light 120 feet above the floor.

The structural framework for this marvelous transformation is now in place. It was erected at great expense and is masked and mutilated by false work which cost relatively little. The picture on page eleven speaks for itself. It is felt that this part of the plan, harmonizing the choir with the nave and with the majestic vaulted crossing, is a last and essential member in the complex design of what promises to be one of the great cathedrals of the world.

It cannot be said too often that the component parts of the plan are officially adopted in principle only, and will be subjected to careful study and modification in detail, both by the authorities and the architects.

THE CATHEDRAL DESIGNS

THE majestic beauty of Messrs. Cram and Ferguson's designs for the Cathedral of St. John the Divine is shown by the insert in this number of *THE CHURCHMAN*, but the rank that will be accorded the finished structure is more fully suggested by a few comparisons.

The building will be slightly longer than Winchester, coming after St. Peter's in respect of length; its internal height slightly exceeds that of Rheims. The central fleche is as tall as the spire of Salisbury. The width of the nave is the same as in Milan, and the great piers of the nave arcade are matched in diameter and height only by those of Milan. The crossing falls a few square feet short of the area "Under the Dome" at St. Paul's. The choir follows the best traditions of the French Gothic of the thirteenth century, indeed it improves upon those traditions. The width of the French choirs (about thirty feet), cramps the groining of the apse into knife-edges, a fault easily avoidable by the fifty-five feet of width here available. The radiating chapels opening out of the choir have already been pronounced by competent authority "the finest chevet in the world." The mighty west front is reminiscent of the best French examples. The spread of the transepts, about 300 feet, is almost unique. Indeed the whole structure is characterized by unusual breadth and consequent nobility.

The architect is especially to be congratulated on the treatment of the central mass, the very crux of any transeptal plan. A polygonal lantern of the type of the Ely octagon has replaced the low square tower of an earlier design, and the element of aspiration demanded by such great length and breadth has been added by a spirelet or fleche of open stone work springing from the top of the lantern. The great English critic James Ferguson said that the Ely octagon is the most beautiful and original achievement of English Gothic and explains that its precedent was not followed and devel-

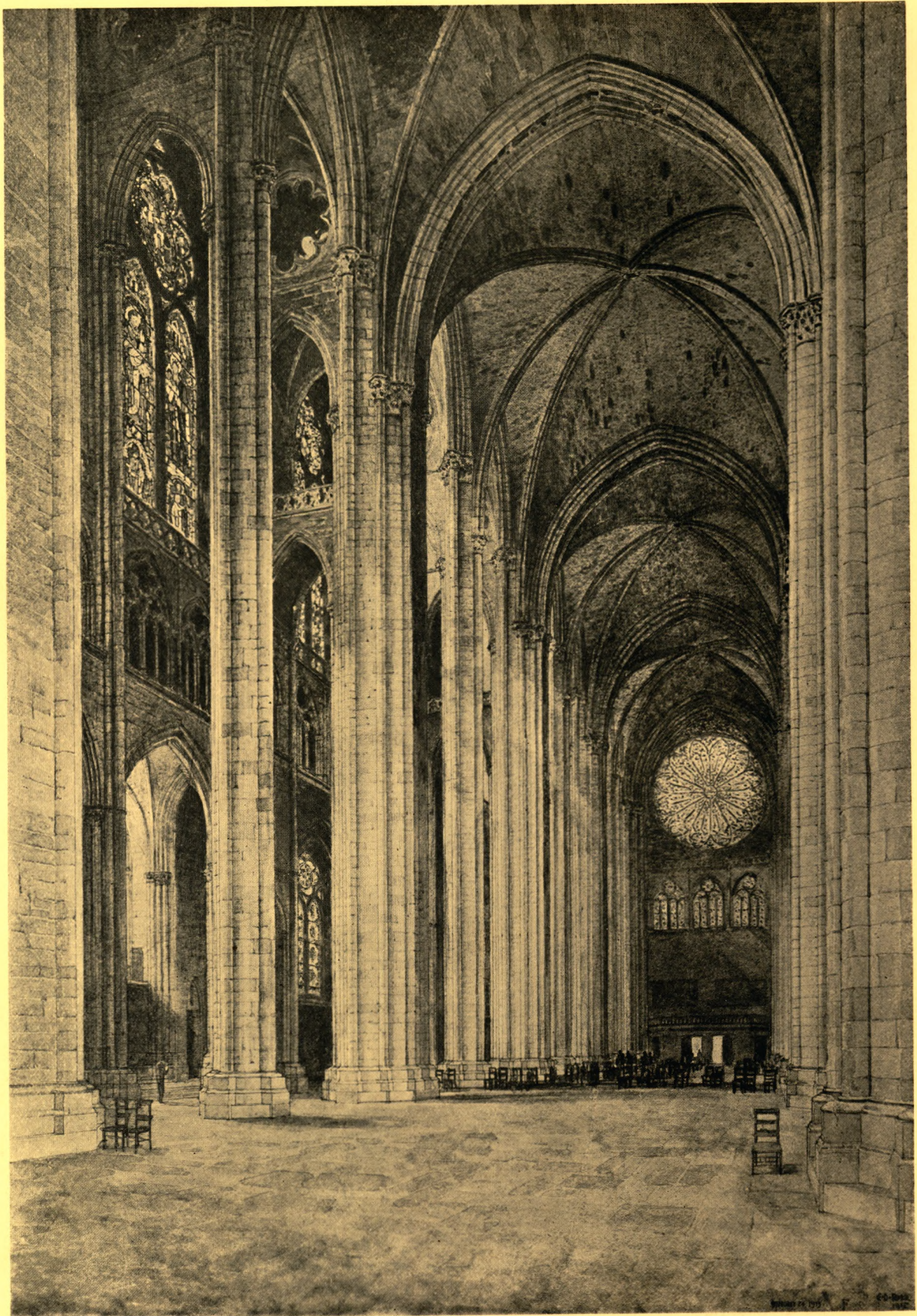
oped only because it was invented too late, appearing only as the cathedral building age was nearing its end. The octagon was not completed according to Allan of Walshingham's original purpose. Its stone work shows strong footings for a crowning superstructure of stone; but, instead was built, probably as a temporary finish, a wooden cupola harmonizing imperfectly with the octagon. James Ferguson said that a possible reawakening of the vital Gothic spirit would yet work out the triumphant realization of the ideal foreshadowed in the octagon of Ely. Is it too much to say that at last an American architect has fulfilled the prophecy of the great English critic?

The cathedral, if built on the lines now indicated, will be one of the world's great temples, coming in size after St. Peter's and Seville (the revised plans of the Liverpool Cathedral are not at hand for comparison), and will take high rank not only for bulk but also for beauty. The magnitude of the task of erecting it gives us pause, but the plans before us are such as to inspire to any effort it may cost to realize them. The first step in any great project is an adequate and inspiring plan. Plato insisted that the original idea is the fundamental reality while its subsequent embodiment is secondary and a matter of detail. This Platonic doctrine lay at the bottom of the admonition to Moses when about to build the Tabernacle: "See that thou make all things after the pattern showed thee in the mount." All great structures are founded in an idea which grows, develops and realizes itself in ways not dreamt of at its first inception. Mr. Cram's article ("How Cathedral Plans Grow" might have been its title) shows the process and principles of thought by which his ideal is being wrought out. The contagion of this great vision will no doubt carry it to full embodiment. When at last it stands upon our Cathedral Heights as its creator's mind now sees it, it will become like Milan and Seville, like Winchester and Ely, like Rheims and Amiens, "a possession forever."

Reprinted from "*The Churchman*" of March 26, 1921 (Easter Number).



PROPOSED MODIFICATION OF CHOIR, FROM THE EAST



PROPOSED NAVE, LOOKING WEST



PROPOSED COMPLETION OF THE CHOIR, LOOKING EAST



PRESENT CONDITION — View from the North East

COMPARATIVE DIMENSIONS OF GREAT CATHEDRALS

CATHEDRAL		Area Square Feet	Height Towers Spires or Domes	Height Interior	Length Exterior	Width Central Aisle
St. Peter's	Rome	227,069	448	150	718	100
Seville	Spain	128,570	400	150	430	60
St. John the Divine	New York	109,082	500	130	601	56
Duomo	Milan	107,000	355	153	500	60
Cologne	Germany	91,464	512	145	511	41
Amiens	France	71,208	361	140	521	40
St. Sophia	Constantinople	70,000	185	184	350	100
Antwerp	Belgium	70,000	397	130	500	35
Chartres	France	68,260	378	122	507	50
Notre Dame	Paris	64,108	204	110	390	45
York	England	63,800	198	99	486	51
St. Paul's	London	59,700	363	89	460	40
St. Patrick's	New York	57,768	339	112	332	48
Winchester	England	53,480	...	78	556	35
Rheims	France	48,985	270	124	483	40
Salisbury	England	46,827	404	84	473	35
Westminster Abbey	London	46,000	225	101	511	35
Ely	England	46,000	215	70	517	34
Lincoln	England	44,400	271	82	482	39
Canterbury	England	36,494	235	80	522	33

Contributions, of whatever amount, for the execution of the foregoing designs will be thankfully received. Checks should be drawn to the order of The Cathedral of St. John the Divine and mailed to the Canon Bursar at the Cathedral.

Legal Title for use in making bequests by will:

"The Cathedral Church of St. John the Divine in the City and Diocese of New York"

"A Guide to the Cathedral Church of St. John the Divine", published by the Laymen's Club, contains 88 pages descriptive of the Cathedral, 16 pages of half-tone illustrations, and many line cuts. In paper covers, 50 cents a copy (by mail 60 cents); in purple cloth and gold, \$1.00 (by mail \$1.10). Address: The Laymen's Club, Cathedral of St. John the Divine, New York, N. Y.